APPLICATION TO SUPPRESS FOUR RICHARDSON FISH NAMES Z.N.(S.) 1740

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1. Richardson's " *Report on the ichthyology of the seas of China and Japan* " (1846), lists 665 species, of which 142 were new species or varieties. For various reasons, certain of Richardson's names have lapsed into obscurity.

(a) The descriptions are often brief, or poor, or both.

(b) Reference to the size, locality, collector, donor and repository of the specimens is sometimes inadequate for types to be recognized with certainty.

(c) Some 22 of Richardson's new species were based on Chinese specimens collected by the Rev. G. Vachell and deposited in Cambridge. The types of 19 of these species were subsequently lost (Whitehead & Joysey, in press, *Bull. Brit. Mus. nat. Hist.* (*Zool.*)).

(d) Some 83 of Richardson's new species were based solely on the unpublished collections of paintings of Chinese fishes compiled by John Reeves in about 1830, of which three copies are in the British Museum (Natural History) and the fourth cannot be traced (see Whitehead, 1966, *Bull. Brit. Mus. nat. Hist.* (*Zool.*), **14** (2) : 15–53).

It is unfortunate, therefore, that Richardson's " *Report* " pre-dates in part some important ichthyological works of the mid-nineteenth century, e.g. most of Bleeker's papers on fishes (1844–1880), and also the later volumes of both the *Histoire Naturelle des Poissons* (1828–1850) of Cuvier & Valenciennes, and the *Fauna Japonica, Pisces* (1842–1850) of Temminck & Schlegel. As a result of two recent studies (Whitehead, *loc. cit.* and Whitehead & Joysey, *loc. cit.*), the following Richardson names have been found to be senior synonyms of well-known or commercially important species whose hitherto accepted names have been commonly used for over a century. In the interests of nomenclatural stability, it is proposed here that the Richardson names be rejected. Future work on Richardson's species will undoubtedly produce more such names.

2. The following names date from Richardson's " *Report* ". The identification of the species has been fully discussed by Whitehead (*loc. cit.*).

(a) *Clupea isingleena* Richardson, 1846. TYPE: a fish of 108·5 mm. standard length in the British Museum (BMNH. 1963.6.17.1), hitherto labelled erroneously as type of *Clupea nymphaea* (see below), but now recognized as the holotype of *C. isingleena*. The specimen is identified as *Sardinella fimbriata* (Valenciennes, 1847), a common Indo-Pacific species frequently cited in the literature. I have been unable to find reference to the name *isingleena* as a senior synonym for a clupeoid fish since its first proposal in 1846.

(b) *Clupea nymphaea* Richardson, 1846. TYPE: Reeves specimen in the British Museum from Canton, now lost; former type of *C. nymphaea*, now recognized as the lost type of *C. isingleena*. On Richardson's description and the Reeves illustration (No. A 25), this species has

been identified as *Sardinella aurita* Valenciennes, 1847, the most widespread and commercially important of all *Sardinella* species. The name *nymphaea* is not a *nomen oblitum*, having been in constant (mis)use for well over 50 years as a result of the type specimen erroneously associated with it.

(c) *Clupea caeruleovittata* Richardson, 1846. No TYPE, the species based solely on a Reeves illustration (No. 59). The identification of this species is uncertain, but all known Chinese clupeoids can be eliminated except *Sardinella leiogaster* Valenciennes, 1847, *Sardinella aurita* Valenciennes, 1847 and *Sardinella clupeoides* (Bleeker, 1849). The first of these has been considered the most probable. The name *caeruleovittata* pre-dates the above names, all of which have been widely accepted in the literature; it has not been used as a senior synonym for a clupeoid fish for over 50 years and can be considered a putative *nomen oblitum*.

3. The following name dates from Richardson's " *Zoology of the Voyage of the Sulphur*, **1** — *Ichthyology* ", published in three fasciculi between April 1844 and October 1845 (see " *Report* ", p. 316 for clue to dating). The identification of this species is discussed fully in Whitehead & Joysey (*loc. cit.*).

(a) *Anguilla clathrata* Richardson, 1844. TYPE: a fish 228 mm. standard length in the Museum of Zoology, Cambridge (No. F.2002), the jar labelled " *Anguilla vulgaris* China Rev. G. Vachell ". The specimen is now identified as *Anguilla japonica* Temminck & Schlegel, 1846, the common Japanese freshwater eel. The name *japonica* has been widely used in the literature for over a century; the name *clathrata*, on the other hand, has been used as a senior synonym only once in the last fifty years, and then only in an index of species without description (Chu, 1931, Index Piscium Sinensium, *Biol. Bull. St. John's Univ.*, No. 1 : 290 pp.). I have been unable to find a reference to the name *clathrata* in the fifty years prior to 1931.

4. In order to bring stability to the nomenclature and to prevent the introduction of little used Richardson names for common Indo-Pacific fishes, it is proposed that the International Commission for Zoological Nomenclature should:

(1) use its plenary powers to suppress the following senior synonyms for the purposes of the Law of Priority but not for those of the Law of Homonymy,

Clupea isingleena Richardson, 1846
Clupea nymphaea Richardson, 1846
Clupea caeruleovittata Richardson, 1846
Anguilla clathrata Richardson, 1844

(2) place the following names on the Official Index of Rejected and Invalid Specific Names in Zoology:

(a) *isingleena* Richardson, 1846, as published in the binomen *Clupea isingleena*;

(b) *nymphaea* Richardson, 1846, as published in the binomen *Clupea nymphaea*;

(c) *caeruleovittata* Richardson, 1846, as published in the binomen *Clupea caeruleovittata*;

(d) *clathrata* Richardson, 1844, as published in the binomen *Anguilla clathrata*;

(3) place the following names on the Official List of Specific Names in Zoology;

(a) *fimbriata* Valenciennes, 1847, as published in the binomen *Spratella fimbriata*;

(b) *aurita* Valenciennes, 1847, as published in the binomen *Sardinella aurita*;

(c) *leiogaster* Valenciennes, 1847, as published in the binomen *Sardinella leiogaster*;

(d) *japonica* Temminck & Schlegel, 1846, as published in the binomen *Anguilla japonica*.